

**ABSTRACT**

A transformer for low frequency applications of from 50Hz to 1000Hz is described. The transformer comprises a core having a cylindrical symmetry around a main revolution axis. The core is formed of a soft isotropic magnetic composite material composed of iron and resin. Windings are enclosed in the magnetic core and disposed about a central column of the magnetic core and magnetically coupled with the inductor for low frequency applications, DC to 1000Hz of similar construction is also described, the inductor comprises a core having a cylindrical symmetry around a main revolution axis. The core is formed of a soft isotropic magnetic composite material composed of iron and resin. Winding is enclosed in the magnetic core and disposed about a central column of the magnetic core and magnetically coupled with the magnetic core. The core is formed by core sections.